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(54) **CERAMIC ATOMIZER**

(57) A device includes a ceramic core and a metal heating wire. The ceramic core includes a body including a through hole.

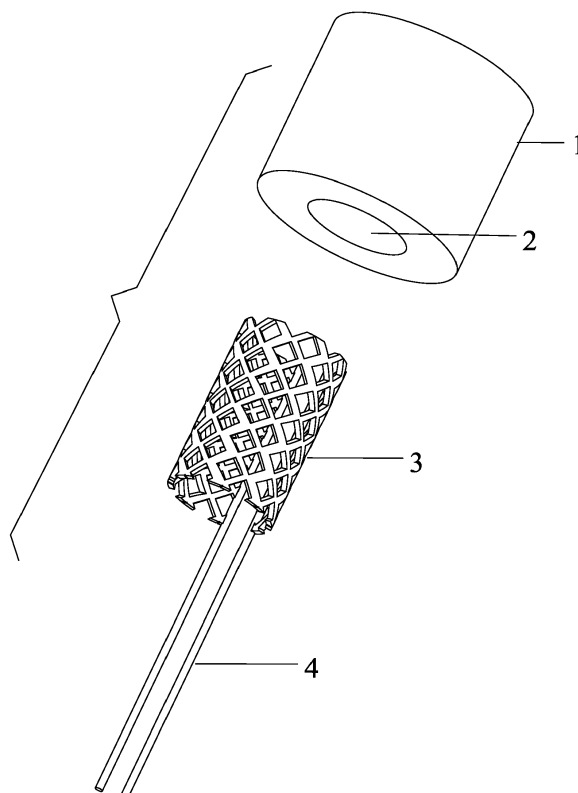


FIG. 1

Description

[0001] The disclosure relates to a ceramic atomizer.

[0002] Conventionally, the ceramic atomizer of the electronic cigarettes is spiral structure with a single cylindrical hole. Thus, the heating area of the ceramic atomizer is small and thus the electronic cigarettes can only produce a small amount of vapor.

[0003] The disclosure provides a device, comprising a ceramic core and a metal heating wire; wherein the ceramic core comprises a body comprising a through hole.

[0004] In a class of this embodiment, the metal heating wire comprises a first part which is a curved meshed structure disposed in the through hole, and a second part which is a pin extended out of the body of the ceramic core.

[0005] In a class of this embodiment, the metal heating wire comprises one or more curved meshed structures, planar helical structures, spiral structures, or a combination thereof connected in series or in parallel.

[0006] In a class of this embodiment, the through hole is round, and two pins are extended out of the body.

[0007] In a class of this embodiment, two pins are soldered on two sides of the one or more curved meshed structures for electric conduction to heat the metal heating wire.

[0008] In a class of this embodiment, the body comprises one or more through holes in the shape of circle, ellipse, square, triangle and polygon.

[0009] In a class of this embodiment, the body of the ceramic core is cylindrical.

[0010] In a class of this embodiment, the body of the ceramic core is in the shape of ellipsoid, flat ellipse, hemisphere, cone, bowl, triangle, quadrilateral, polygon; and the ceramic core is an equivalent of quartz, crystal, mica, agate, jade.

FIG. 1 is an exploded view of a ceramic atomizer in accordance with one embodiment of the disclosure;

FIG. 2 is a schematic diagram of a ceramic atomizer in accordance with one embodiment of the disclosure; and

FIG. 3 is a sectional view of a ceramic atomizer in accordance with one embodiment of the disclosure.

[0011] To further illustrate, embodiments detailing a ceramic atomizer are described below. It should be noted that the following embodiments are intended to describe and not to limit the disclosure.

[0012] As shown in FIGS. 1-3, the disclosure provides a ceramic atomizer comprising a ceramic core 1 and a metal heating wire 3. The ceramic core 1 comprises a body comprising a round through hole 2, and two pins 4 secured to the body for electric conduction. In certain embodiments, the ceramic core 1 comprises one round through hole and one metal heating wire. The metal heating

wire 3 is a curved meshed structure. The metal heating wire 3 is disposed in the ceramic core 1 or exposed in the round through hole 2. The two pins 4 are electrified to make the metal heating wire 3 heated, and the heat is transferred to the ceramic core 1 to atomize the e-liquid.

[0013] The following advantages are associated with the ceramic atomizer of the disclosure:

[0014] 1. The body of the ceramic core is cylindrical, which is easy to manufacture. The metal heating wire comprises one or more curved meshed structures, which enlarges the heating area, increases the heat value, accelerates temperature rise and increases the vapor amount.

[0015] 2. The metal heating wire is in the shape of curved meshed structure, which is novel.

Claims

1. A device, comprising a ceramic core and a metal heating wire; wherein the ceramic core comprises a body comprising a through hole.
2. The device of claim 1, wherein the metal heating wire comprises a first part which is a curved meshed structure disposed in the through hole, and a second part which is a pin extended out of the body of the ceramic core.
3. The device of claim 2, wherein the metal heating wire comprises one or more curved meshed structures, planar helical structures, spiral structures, or a combination thereof connected in series or in parallel.
4. The device of any one of claims 1-3, wherein the through hole is round, and two pins are extended out of the body.
5. The device of claim 4, wherein two pins are soldered on two sides of the one or more curved meshed structures for electric conduction to heat the metal heating wire.
6. The device of claim 5, wherein the body comprises one or more through holes in the shape of circle, ellipse, square, triangle and polygon.
7. The device of claim 6, wherein the body of the ceramic core is cylindrical.
8. The device of claim 7, wherein the body of the ceramic core is in the shape of ellipsoid, flat ellipse, hemisphere, cone, bowl, triangle, quadrilateral, polygon; and the ceramic core is an equivalent of quartz, crystal, mica, agate, jade.

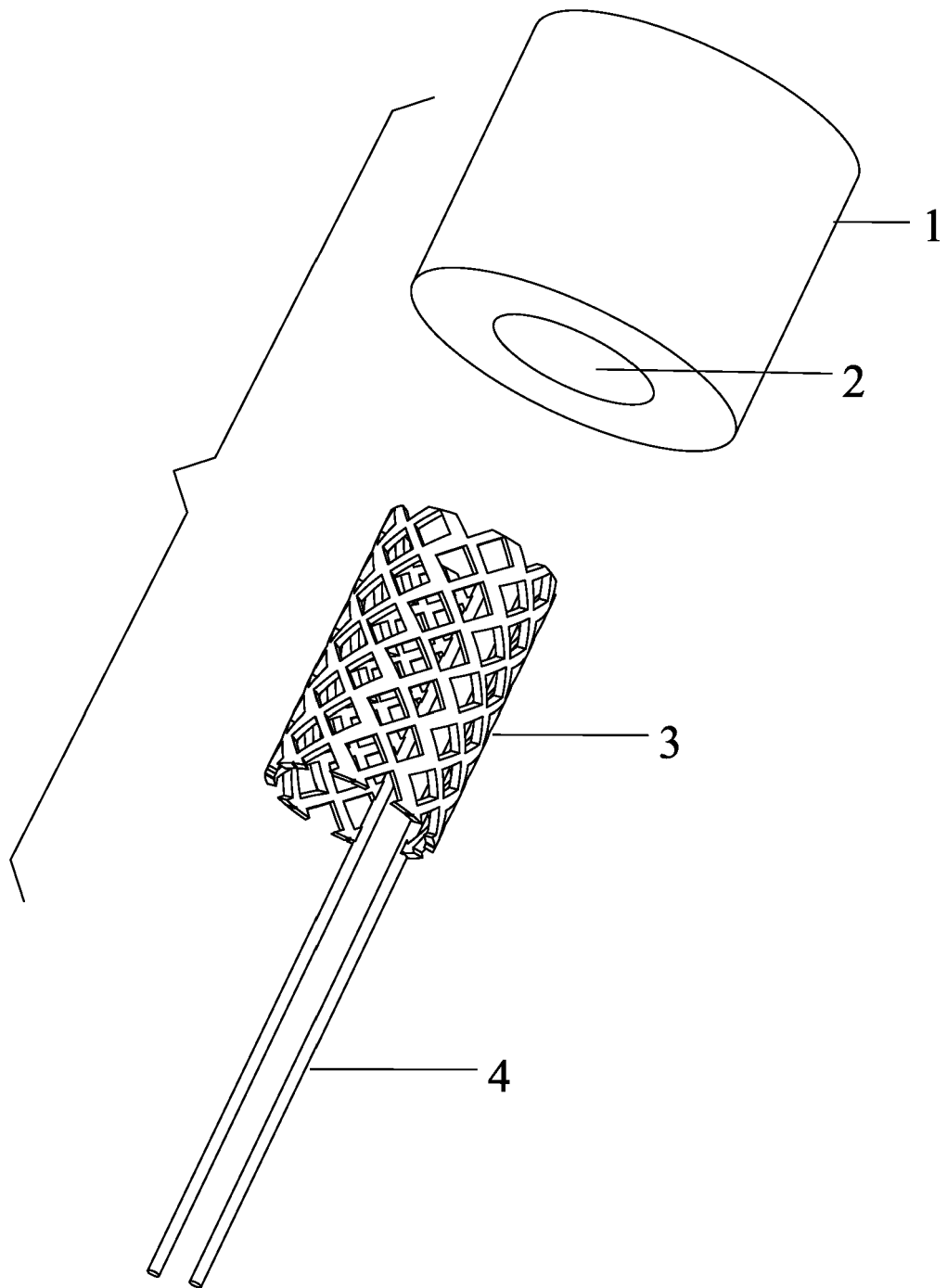


FIG. 1

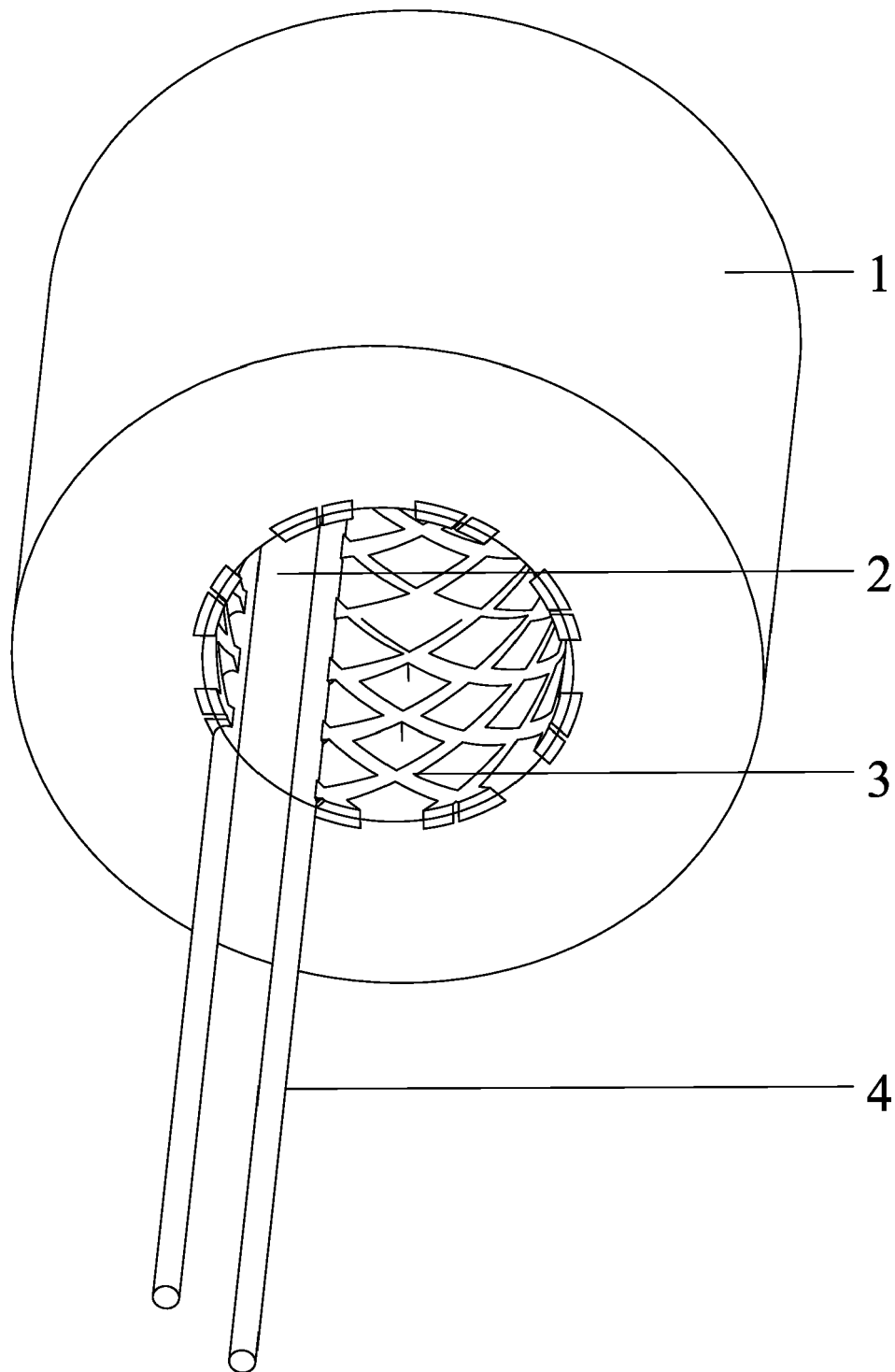


FIG. 2

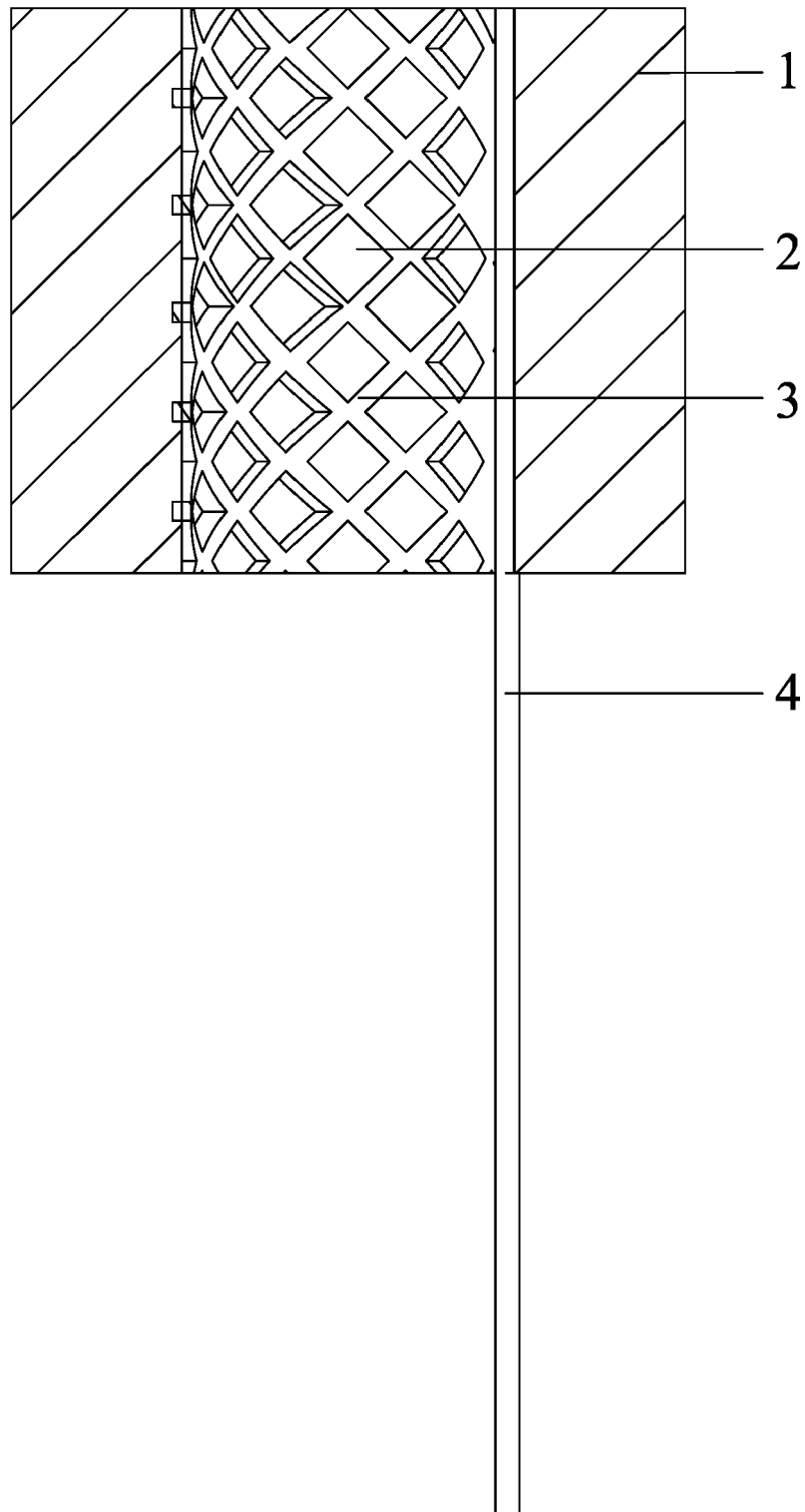


FIG. 3



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 Application Number
 EP 20 21 5989

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Place of search Munich		Date of completion of the search 4 June 2021	Examiner Pierron, Christophe
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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